

# **I100 Integration Scenarios**

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Senior Product Manager - Integration

### **Timing and Agenda**

April 3, 2023 -10:00-11:30 AM

Day 1

**Lesson 1.1: Creating a File Provider** 

**Lesson 1.2: Creating a Microsoft SQL Provider** 

**Lesson 2.1: Importing New Master Records** 

**Lesson 2.2: Updating Records by Using IDs** 

April 4, 2023 -10:00-11:30 AM

Day 2

**Lesson 2.3: Deleting Incorrectly Imported Records** 

Lesson 2.4: Working with Auto-Numbered Imported Records

**Lesson 2.5: Working with Master-Detail Records** 



### **Timing and Agenda**

April 5, 2023 -10:00-11:30 AM

Day 3

**Lesson 2.6: Importing Records with Attributes** 

**Lesson 3.1: Importing Records in the Simplified** 

Way

**Lesson 4.1: Exporting Records** 

April 6, 2023 -10:00-11:30 AM

Day 4

**Lesson 4.2: Modifying Records By Using Export** 

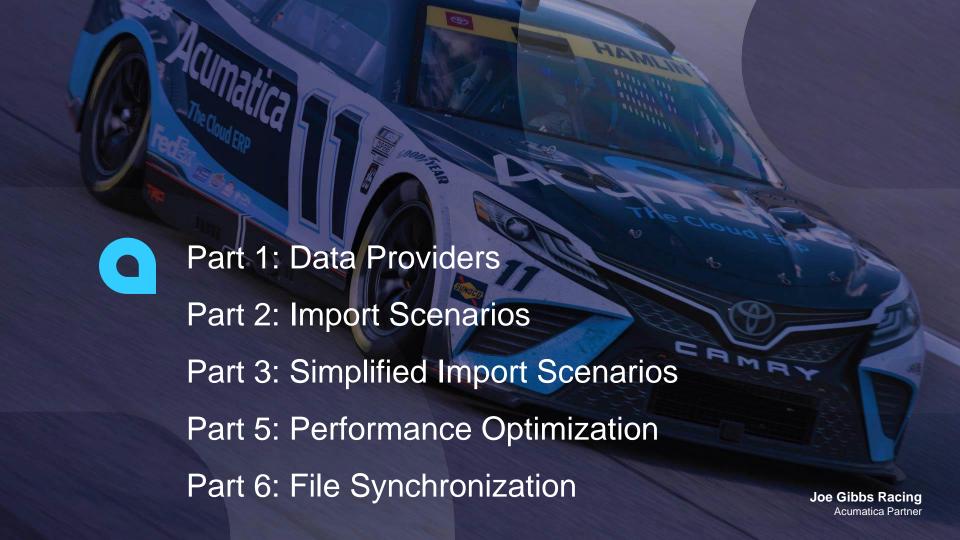
**Scenarios** 

**Lesson 5.1: Optimizing the Performance of Data** 

**Import** 

**Lesson 6.1: Scheduling Data Import and Export** 





# Day 1



# **Lesson 1.1: Creating a File Provider**

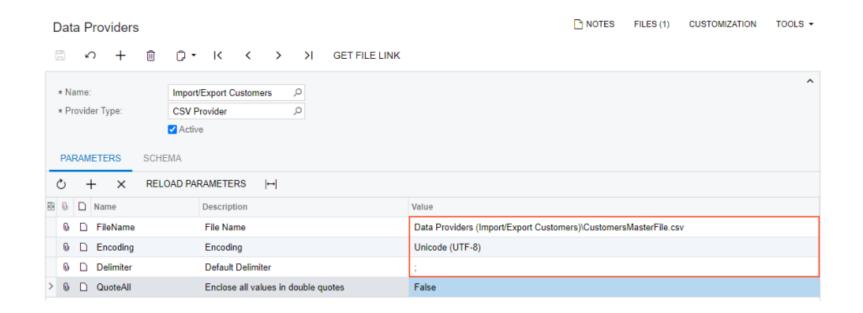
#### **Learning Objectives**

In this lesson, you will learn how to do the following:

- Create and configure a CSV provider
- Create and configure an Excel provider
- Modify a file provider
- Link a file provider to an existing file

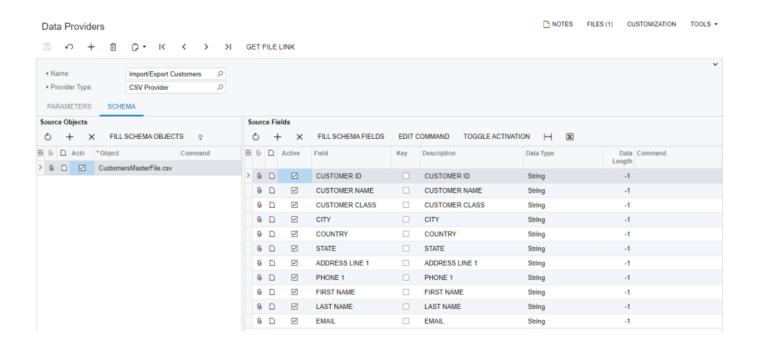


## Figure: CSV provider parameters



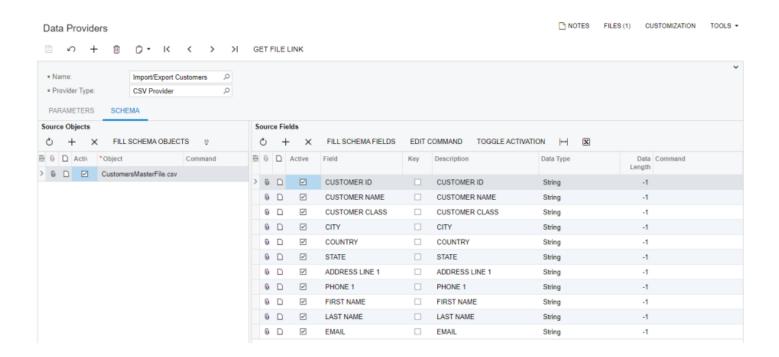


#### Figure: The schema of the Import/Export Customers data provider



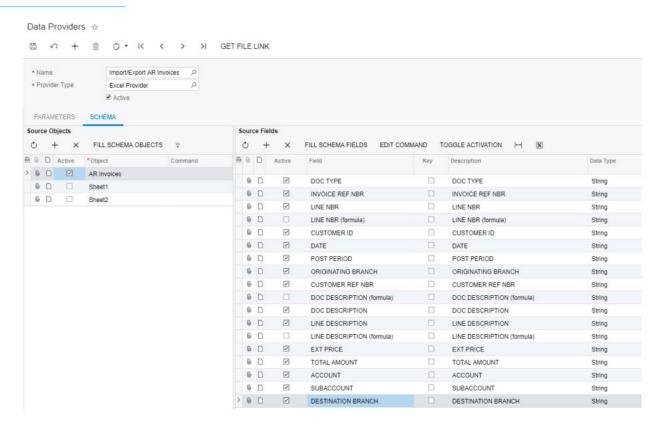


### Figure: The schema of the Import/Export AR Invoices data provider

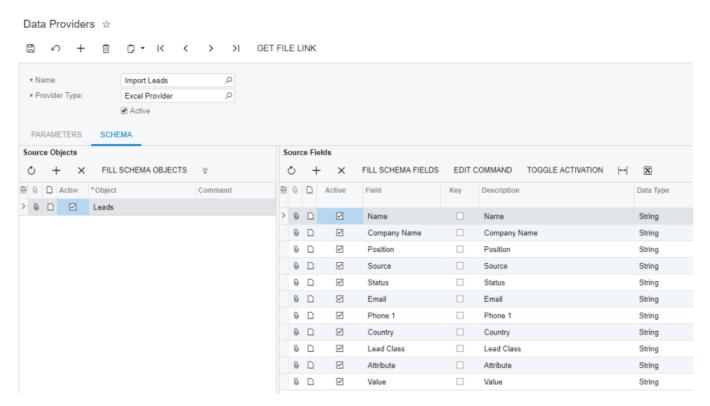




### Figure: Schema of the Import/Export AR Invoices data provider



# Figure: Import Stock Items provider schema



### **Lesson Summary**

In this lesson, you have learned how to create CSV and Excel file providers. In the process, you have learned that the procedure is similar for both types of file data providers. Below is the summary of the main steps you have completed to create each file provider:

- 1. Reviewing the source file to determine the needed provider type, to check that the file meets the requirements, and to see the schema that should be uploaded to the data provider.
- 2. Creating a data provider in the system and specifying its type.
- 3. Attaching the source file to the newly created provider and correcting the parameters of the data provider, if necessary.
- 4. Specifying the objects and fields of the provider.

Now the data providers are ready for use in integration scenarios.

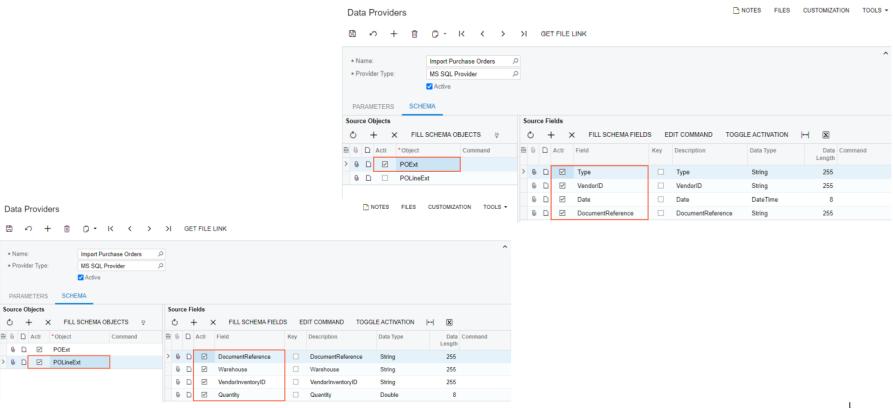
#### **Lesson 1.2: Creating a Microsoft SQL Provider**

#### **Learning Objectives**

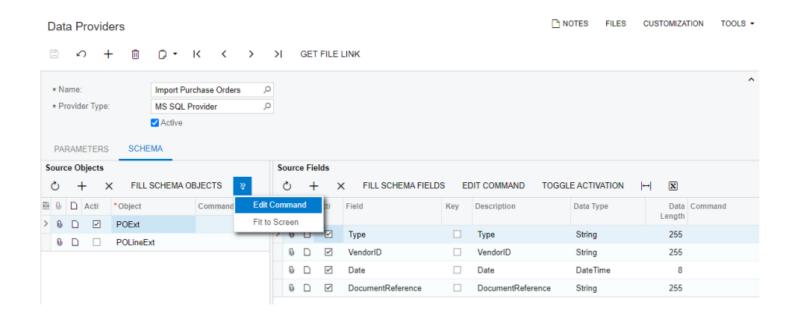
In this lesson, you will learn how to do the following:

- Create a Microsoft SQL provider and specify the connection parameters for it
- Use SQL SELECT statements and SQL functions to override schema objects

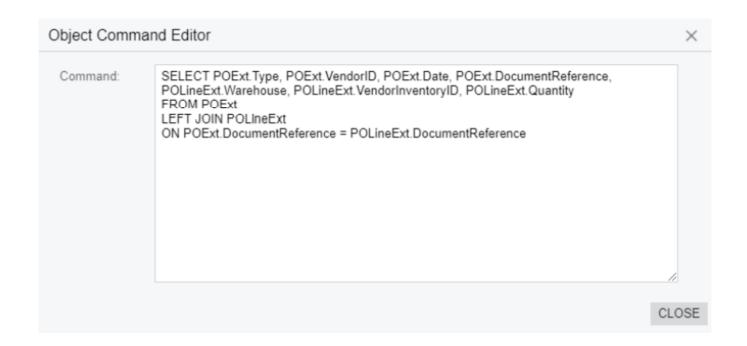
## Figure: Active fields of the POExt object



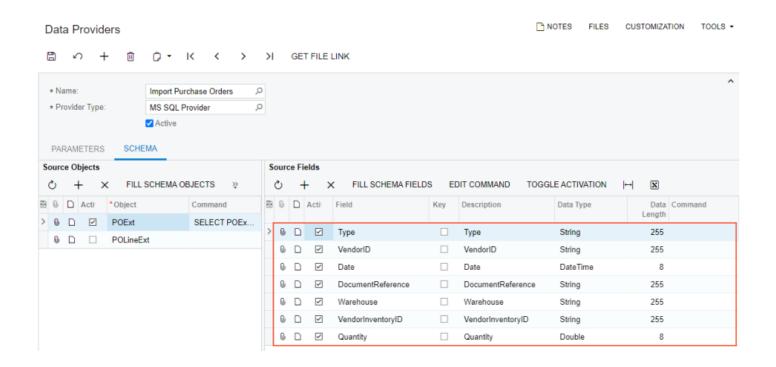
# **Figure: The Edit Command button**



## **Figure: Object Command Editor dialog box**



## Figure: Import Purchase Orders provider schema



### **Lesson Summary**

In this lesson, you have learned how to create a Microsoft SQL provider. To create a Microsoft SQL provider, you have specified the location of the Microsoft SQL Server instance and connection parameters, and have populated the schema objects and fields from the server. SQL commands and functions can be used to override the objects.

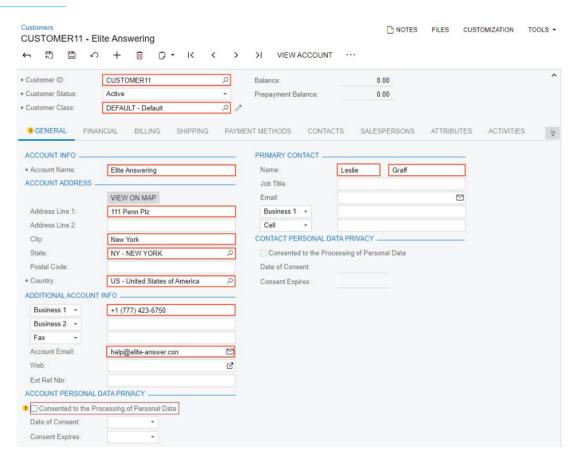
## **Lesson 2.1: Importing New Master Records**

#### **Learning Objectives**

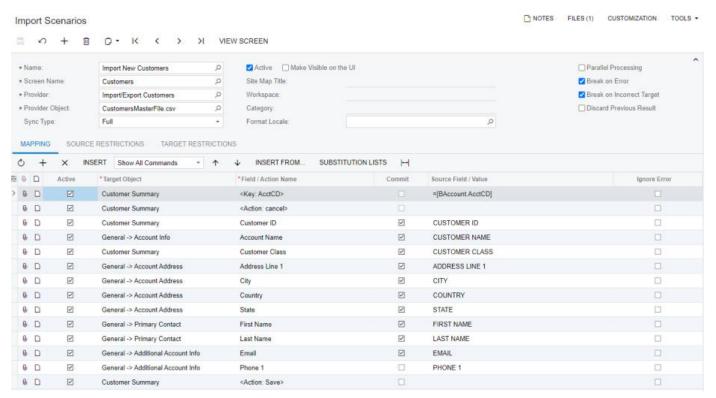
In this lesson, you will learn how to do the following:

- Create a scenario for importing new records
- Import records by using the created scenario

## **Figure: Customers form**

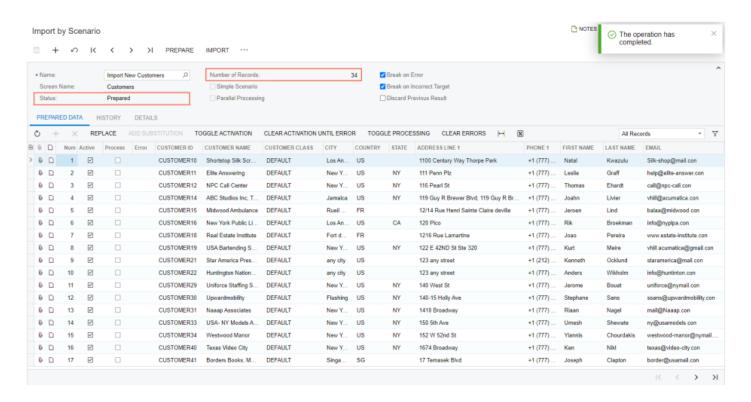


#### Figure: Import New Customers scenario





### Figure: Prepared records on the Import by Scenario form





#### **Lesson Summary**

In this lesson, you have learned how to import new master records into Acumatica ERP by using import scenarios. To import new records, you have done the following:

- 1. Created a data provider for the source data (done in Part 1 of the course)
- 2. Reviewed the sequence of actions to be performed on the applicable Acumatica ERP form if you were entering the record manually
- 3. Created an import scenario that uses the data provider and reproduces the sequence of actions performed on the form in the scenario mapping
- 4. Imported data records by using the created scenario

After the records were imported, you verified the results by using one of the methods described in "Recommendations for Data Verification".

To create the mapping for the import scenario, you have done the following:

- Mapped the key field first
- Specified the mapping steps in the order in which the corresponding fields and actions were manually entered on the form
- Added the <Action: Save> step to the mapping to save the changes that you made through the scenario



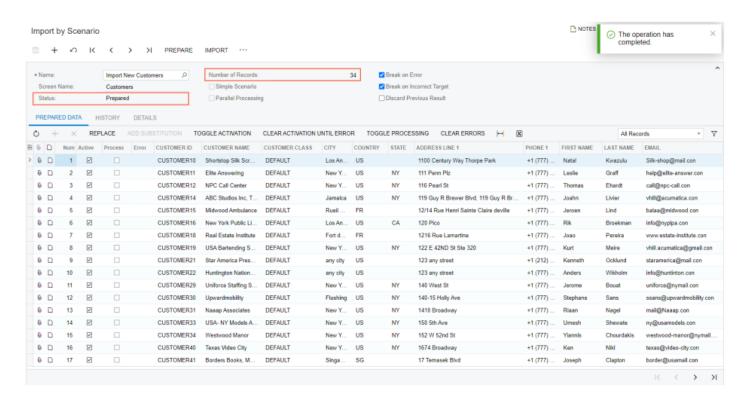
# **Lesson 2.2: Updating Records by Using IDs**

#### **Learning Objectives**

In this lesson, you will learn how to do the following:

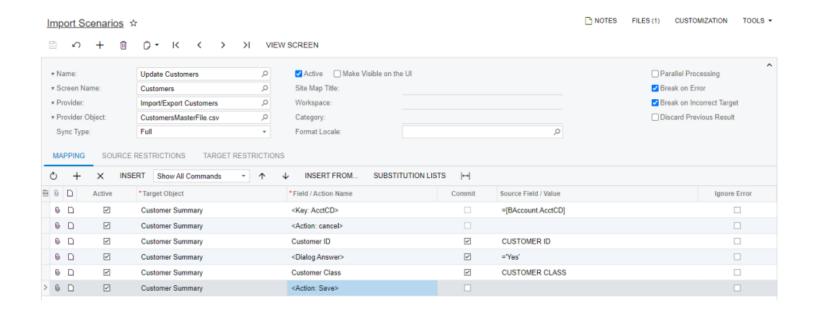
- Create an import scenario for data update
- Handle dialog box answers in import scenarios
- Update records by using an import scenario
- Select the data synchronization type

### Figure: Prepared records on the Import by Scenario form

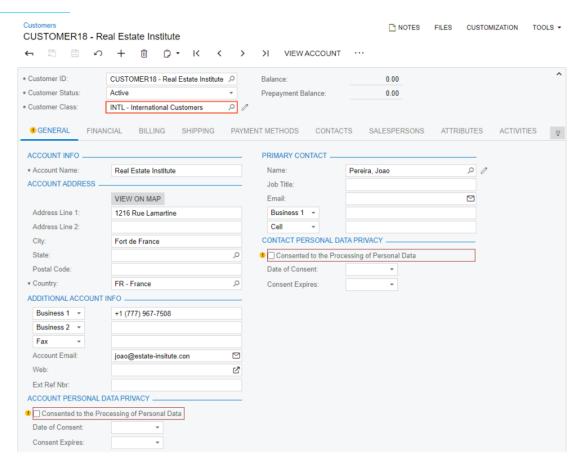




## Figure: The final scenario mapping

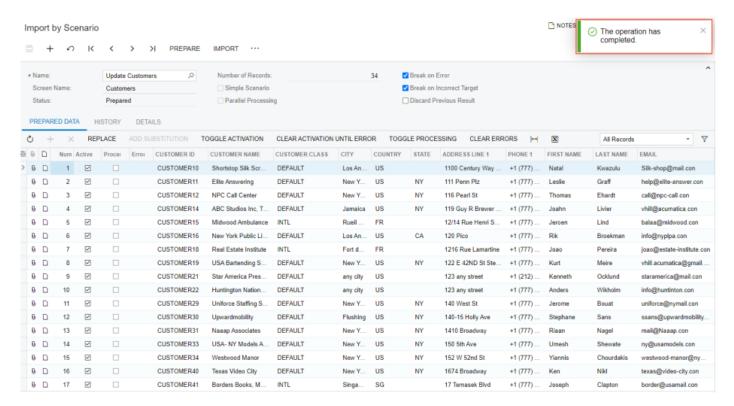


#### Figure: The CUSTOMER18 customer account with the INTL customer class

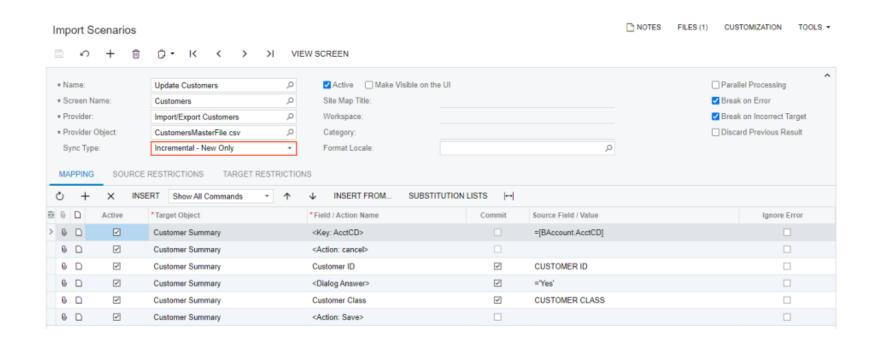




### Figure: Successful completion of the preparation process

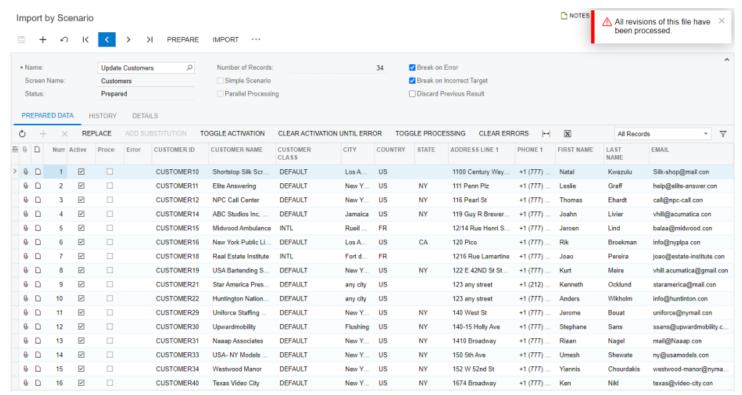


## Figure: Changed Sync Type in Update Customers scenario





### Figure: Failed preparation process





### **Lesson Summary**

In this lesson, you have learned how to create an import scenario for data update and how to use this scenario to update previously imported records.

When a user updates some fields on some forms, a dialog box might be displayed with a confirmation request. In a scenario for such a form, you have to use the command in the scenario mapping to answer the question in the dialog box. In the mapping, the command should be inserted before the field whose change causes the dialog box to appear, as was shown in this lesson.

You can insert the command after the field whose change causes the dialog box to appear only if the Commit check box is cleared for this field.

You have also learned how to use data synchronization options when importing data from file data sources. On the Import Scenarios (SM206025) form, you can set the SyncType box of the import scenario to Incremental - New Only or Incremental - All Records (instead of the default setting, Full). Both of these options make the system execute the import scenario only if a new version of the file is uploaded; if no new file is provided, the import will not be run.

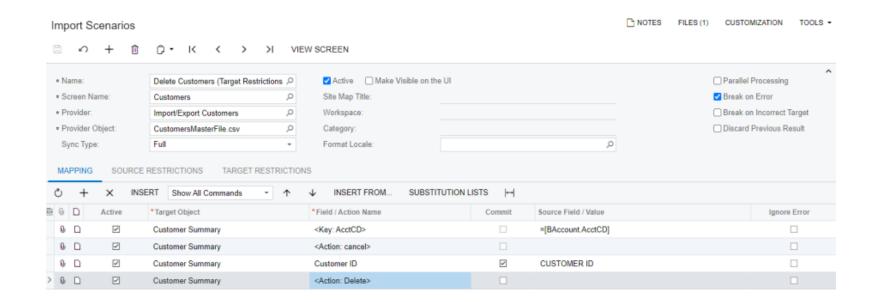
## **Lesson 2.3: Deleting Incorrectly Imported Records**

#### **Learning Objectives**

In this lesson, you will learn how to do the following:

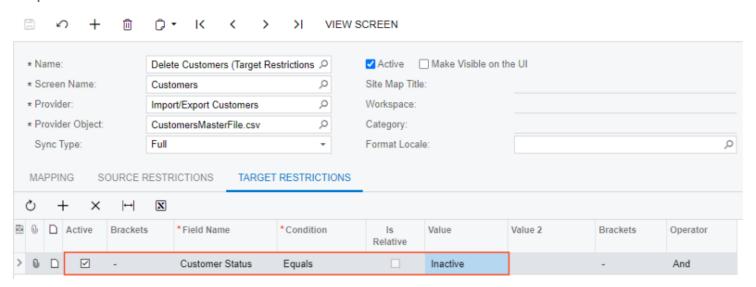
- Delete records by using an import scenario
- Apply restrictions on the source and target fields in the import scenario

# Figure: Delete Customers (Target Restrictions) scenario

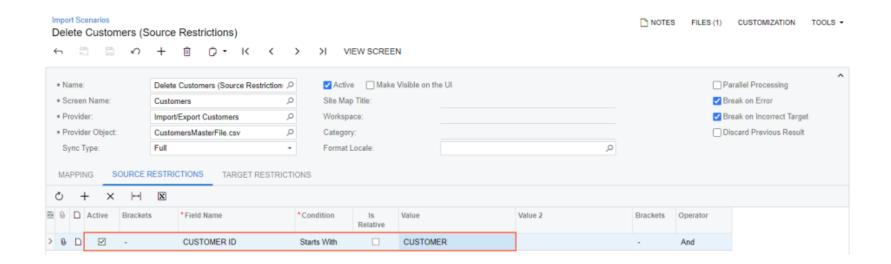


## **Figure: Target restrictions**

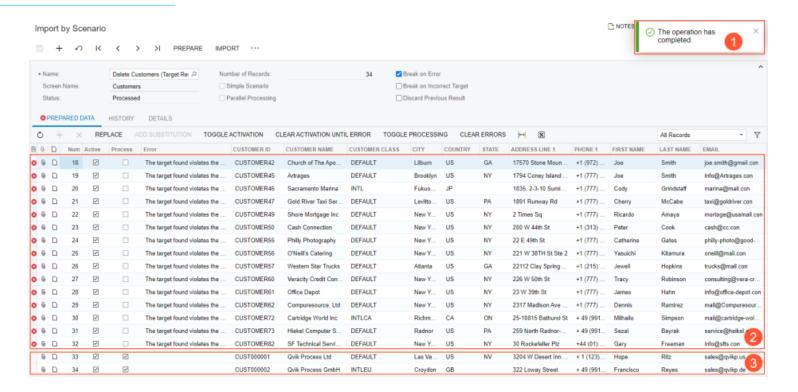
#### Import Scenarios



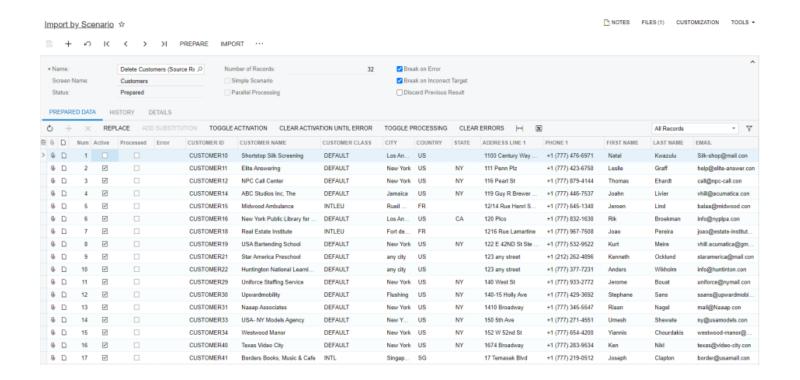
## **Figure: Source restrictions**



### Figure: The processed records



#### Figure: The records prepared for import





#### **Lesson Summary**

In this lesson, you have learned how to use import scenarios to delete records with the IDs specified in the source file. To delete records, you have used <Action: Delete> at the end of the scenario mapping.

You have also learned how to specify restrictions for the source and target records in import scenarios on the Source Restrictions and Target Restrictions tabs of the Import Scenarios (SM206025) form. You have used source restrictions to select certain records from the source to be imported. You have used target restrictions to execute the import scenario only for records in the system that satisfy the target restriction conditions of the import scenario.

# Day 2



#### **Lesson 2.4: Working with Auto-Numbered Imported Records**

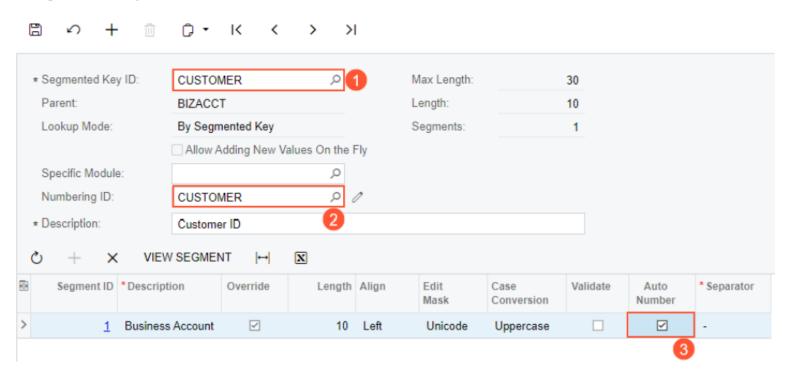
#### **Learning Objectives**

In this lesson, you will learn how to do the following:

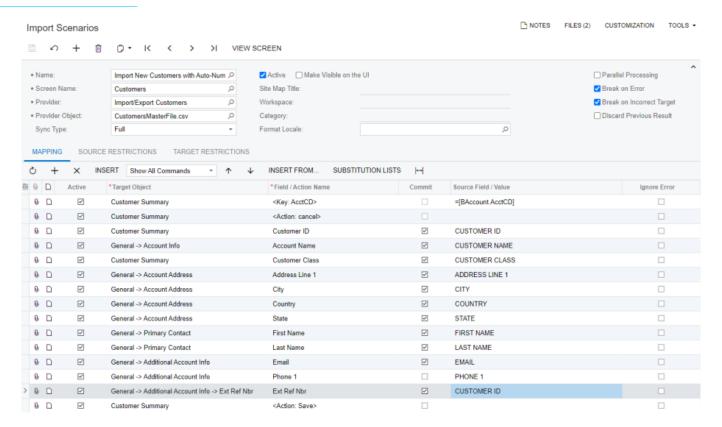
- Import records with automatically generated IDs through an import scenario
- Search for the imported records by a custom key and by a column of the lookup table

## Figure: CUSTOMER segmented key

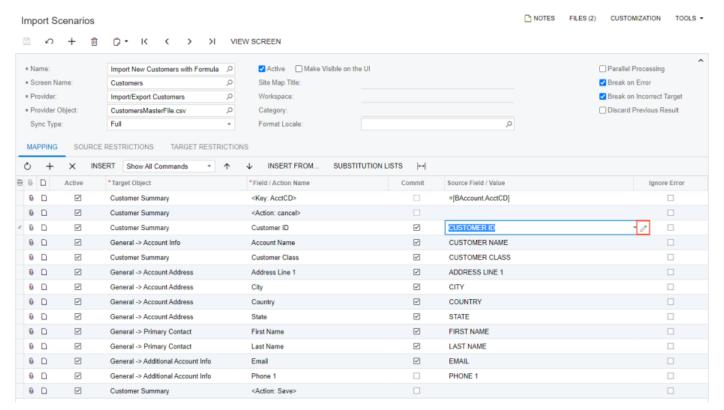
#### Segmented Keys



### Figure: Mapping of the scenario

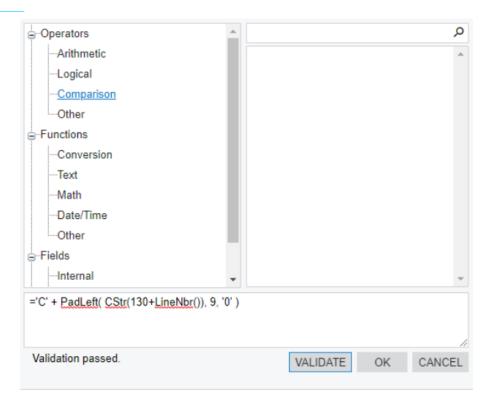


#### Figure: The Edit button

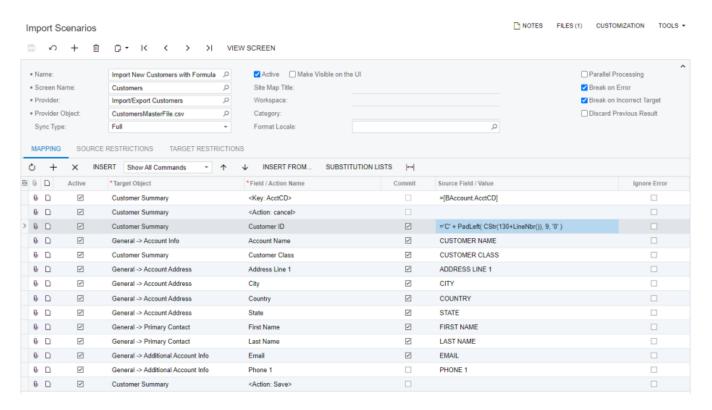




## Figure: The formula for a source field

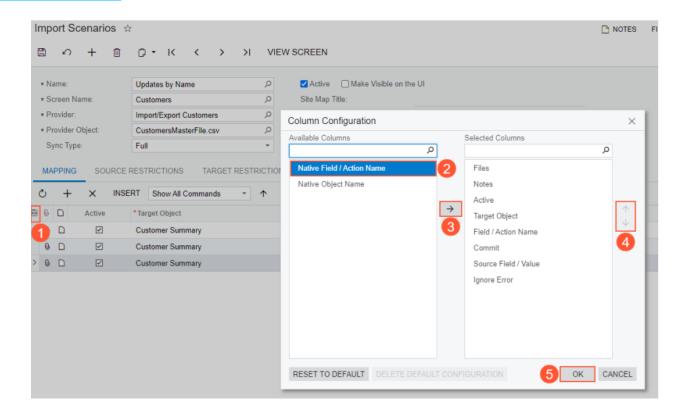


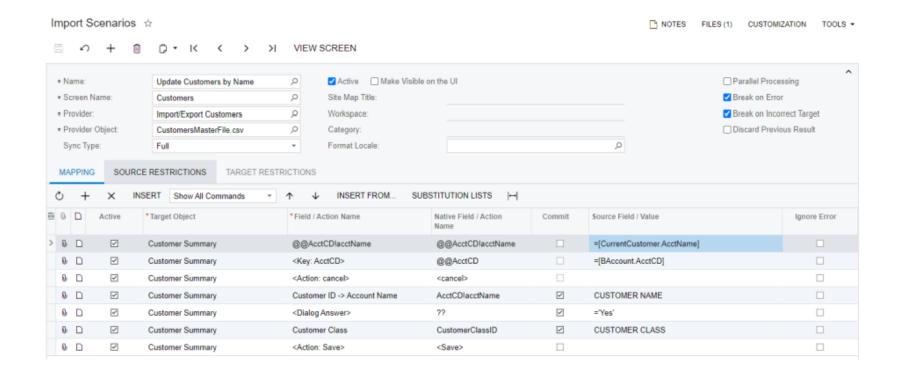
### Figure: The formula for a source field





### **Figure: Column Configuration dialog box**

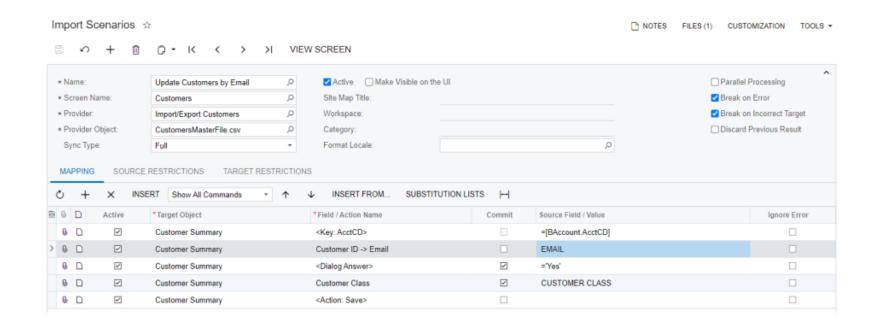




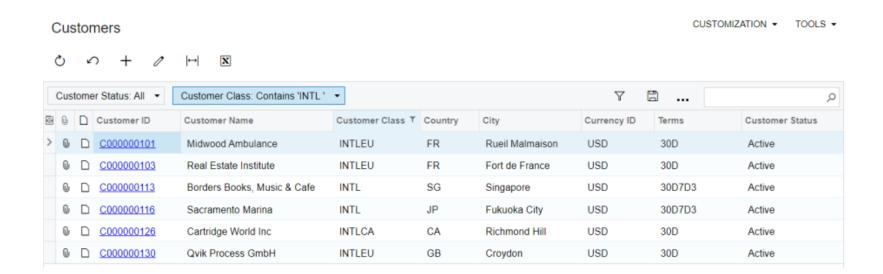


### Figure: Customer records with the INTL customer class after update

CUSTOMIZATION ▼ TOOLS ▼ Customers Customer Class: = 'INTL' . Customer Status: All ... Q Customer Class T Country Customer Name City Currency Terms Customer Status C000000101 Midwood Ambulance INTL FR Rueil Malmaison USD 30D7D3 Active Real Estate Institute FR Fort de France USD 30D7D3 INTL Active C000000113 Borders Books, Music & Cafe INTL SG Singapore USD 30D7D3 Active Fukuoka City C000000116 Sacramento Marina INTL JΡ USD 30D7D3 Active C000000126 Cartridge World Inc INTL CA Richmond Hill USD 30D7D3 Active Qvik Process GmbH GB Croydon INTL USD 30D7D3 Active



#### Figure: Customer records with the changed classes after update



#### **Lesson Summary**

In this lesson, you have learned how to import customer records with IDs that the system automatically assigns. You have also learned how to mass-update records in the system that are identified by a value other than the ID. If you do not have the IDs of the records in the source, in the import scenario, you can identify the records by unique information that you have, such as the name or email address of the customer. To search for a record, you have to declare a custom key or use a column of the lookup table of the predefined key field.

You have learned that to create a custom key, you have to do the following on the Import Scenarios (SM206025) form:

- 1. Set the value of the custom key field, and select the Commit check box for it.
- 2. Directly before the step that sets the value of the custom key field, insert a step with the @ @ notation that defines the field as the key.

To search for a record, you have used the fields of the Summary object as custom keys. (You cannot use the fields of other objects as custom keys.)

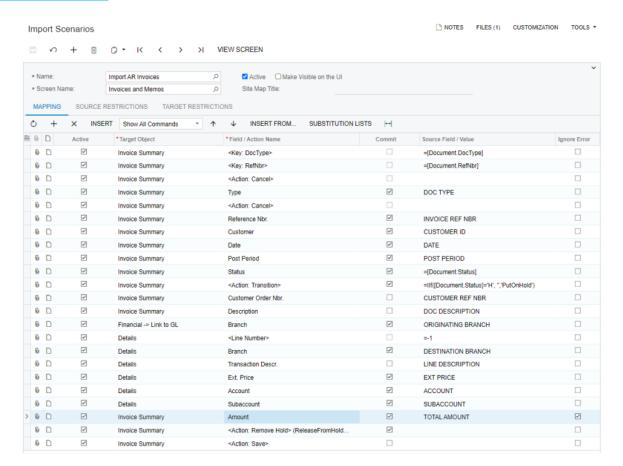
To use the column of the lookup table for a search, you mapped the column command to the matching external field.

#### **Lesson 2.5: Working with Master-Detail Records**

#### **Learning Objectives**

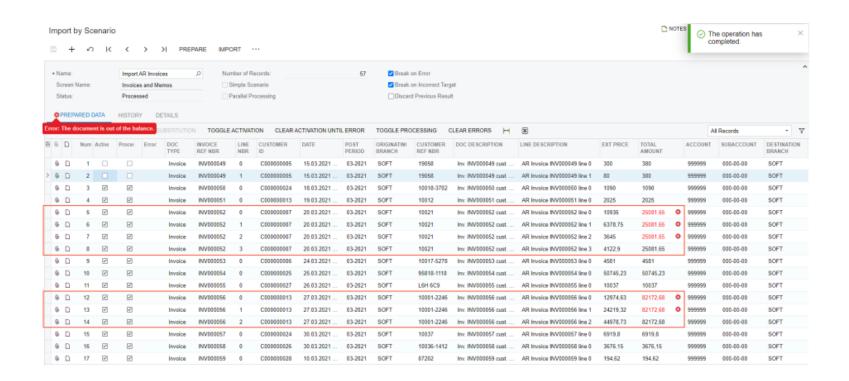
In this lesson, you will learn how to do the following:

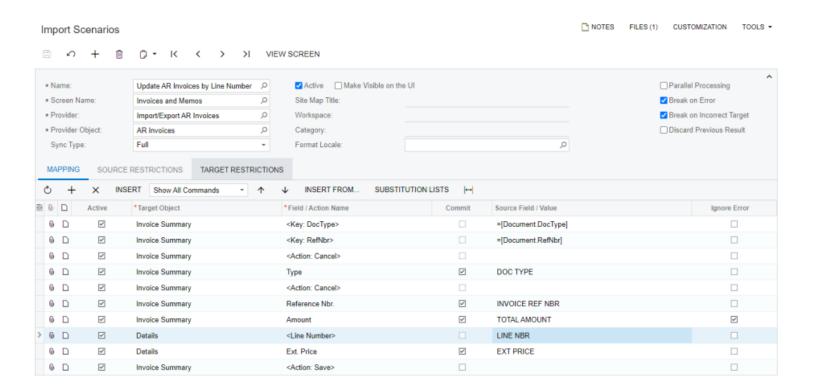
- Import master-detail records with IDs and automatic numbering
- Update detail lines of the imported records by using import scenarios
- Apply actions to imported records
- Configure an import scenario to import country-specific data correctly Select items for document lines from a dialog box in import scenarios

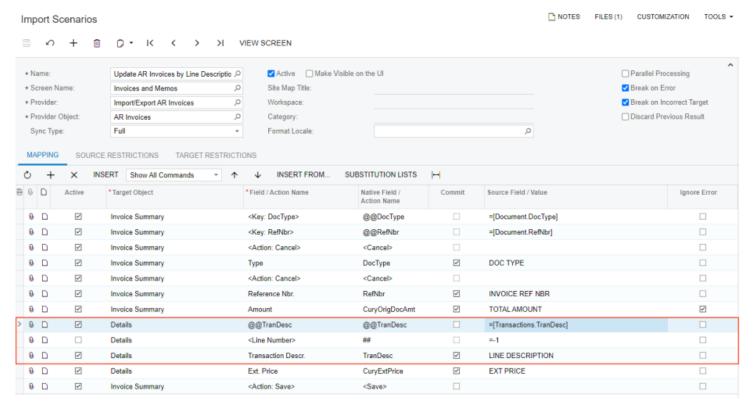




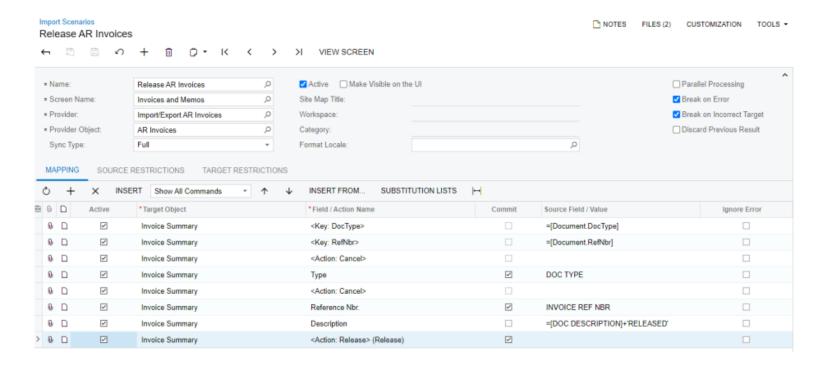
#### Figure: The error during import



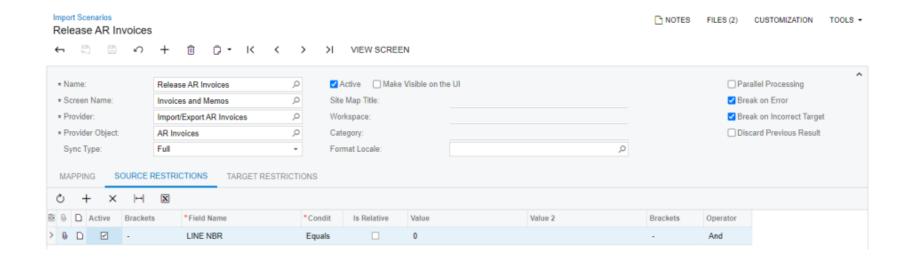




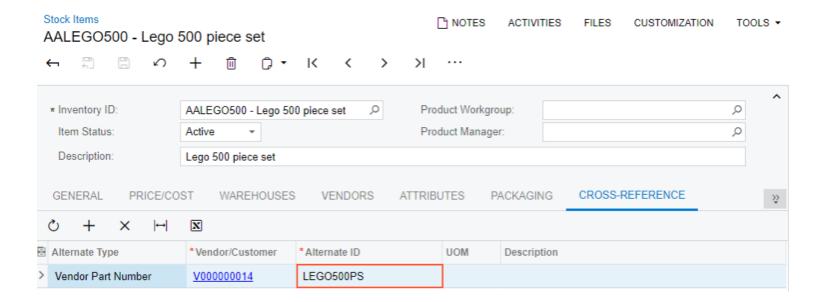




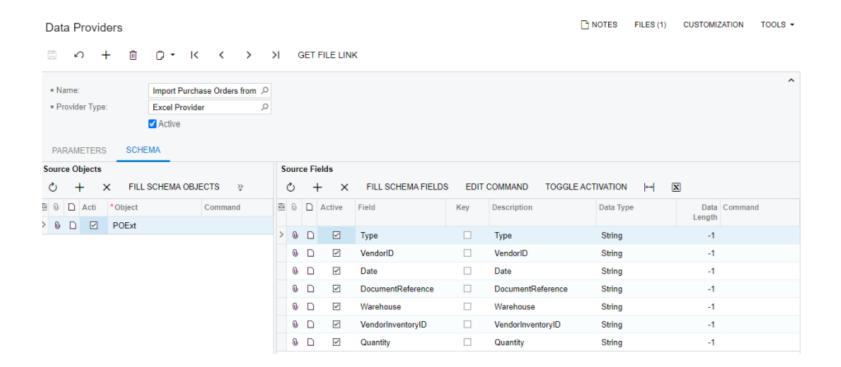
### **Figure: Source restriction**



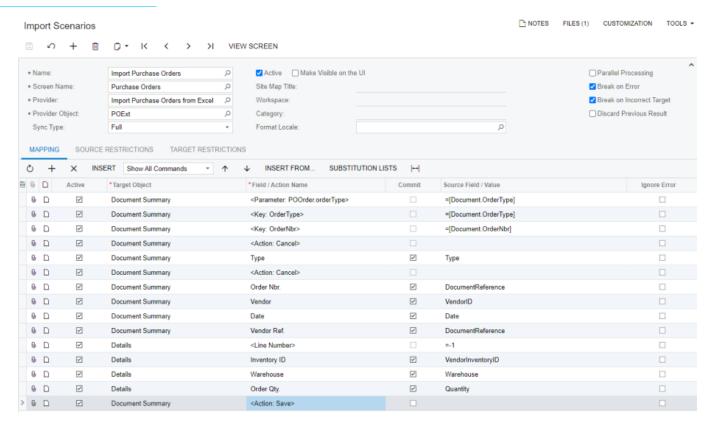
#### Figure: Vendor part number



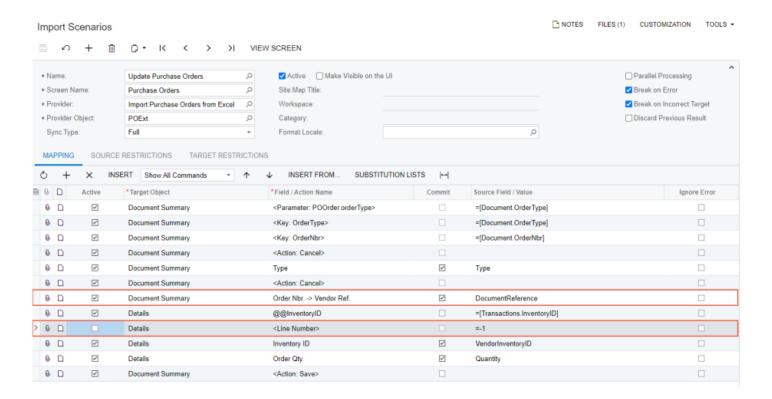
### Figure: Import Purchase Orders from Excel data provider



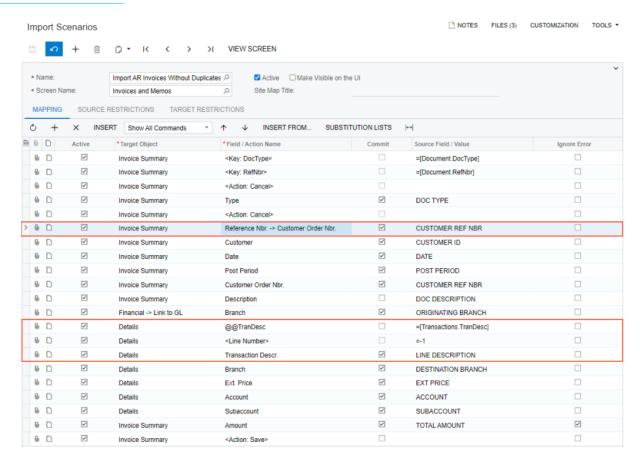
### **Figure: Import Purchase Orders scenario**



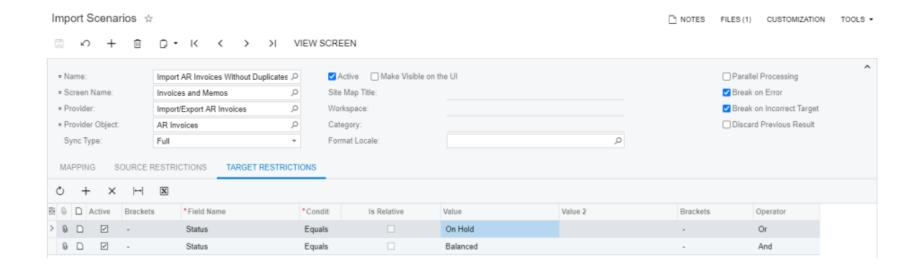
### **Figure: Update Purchase Orders scenario**



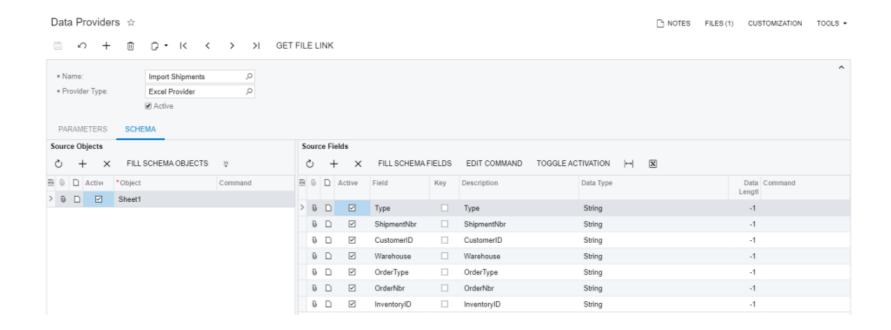
### Figure: The Import AR Invoices Without Duplicates scenario



## **Figure: Target restrictions**

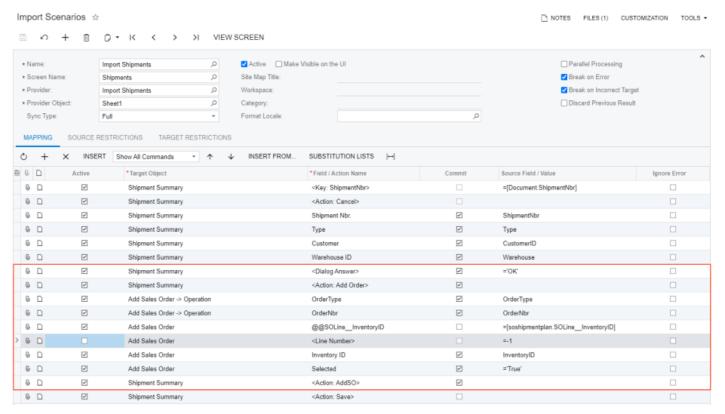


### Figure: Import Shipments data provider

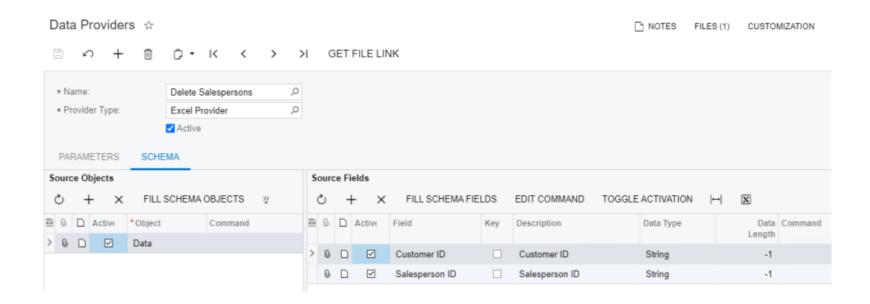




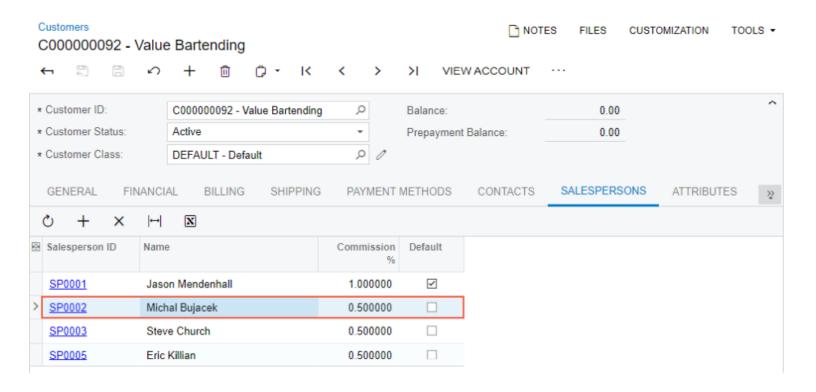
#### Figure: Import Shipments scenario mapping



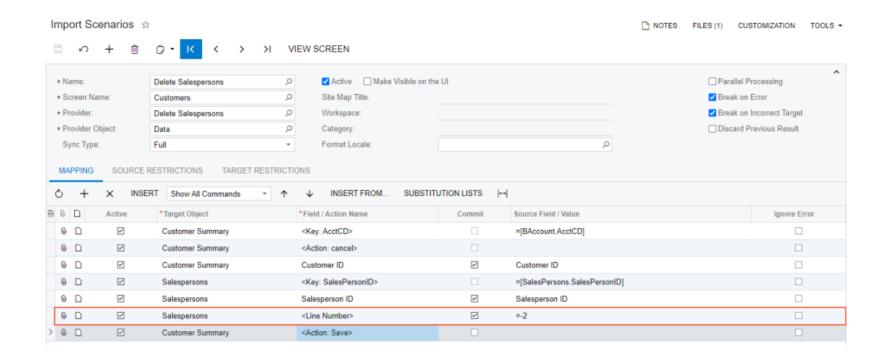
### Figure: Delete Salespersons data provider



#### Figure: The Salespersons tab of the Customers form



### **Figure: The Delete Salespersons scenario**



#### **Lesson Summary**

In this lesson, you have learned how to import, update, and apply actions to master-detail records, such as documents, by using import scenarios. You have learned that when you are configuring the mapping for a scenario that works with master-detail records by using the Mapping tab of the Import Scenarios (SM206025) form, you should heed the following considerations:

- You have to map the key fields first.
- You should map the key fields to external fields or formulas so that the system can distinguish detail records that belong to different documents.
- You should specify the commands in the order they are performed during manual entry.
- You can modify service commands in order to change the default behavior of the system.
- To update detail lines correctly, you should specify the line number of the detail or search for the needed detail by using the unique value of a detail table column.
- To apply an action to imported records, you should use the command for this action instead of the <Action:Save> command at the end of the scenario.
- To select a detail line from a dialog box, you should do the following:
  - a. Insert the dialog answer command before the action that opens the panel on the Mapping tab of the Import Scenarios form. (The Commit check box is selected automatically.)
  - b. Open the dialog box by using the action command that opens it on the form. (The Commit check box is selected automatically.)
  - c. Select the necessary detail lines and close the dialog box by using the action command used to close it. (The Commit check box should be selected for all fields of the dialog box and for the action that closes the dialog box.)
- To delete a detail line, you insert the <Line Number>=-2 command after the row that specifies the detail line, and select the Commit check box for the command.

You have also learned how to import dates and other country-specific data correctly by using the Format Locale setting of the import scenario, which is specified in the Summary area of the Import Scenarios form.



# Day 3



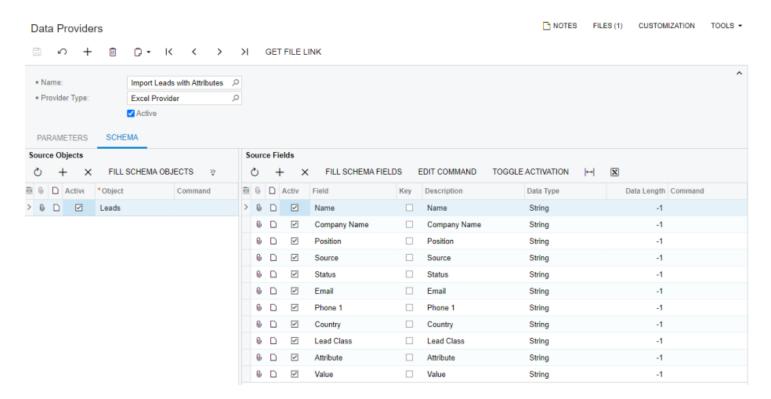
## **Lesson 2.6: Importing Records with Attributes**

#### **Learning Objectives**

In this lesson, you will learn how to do the following:

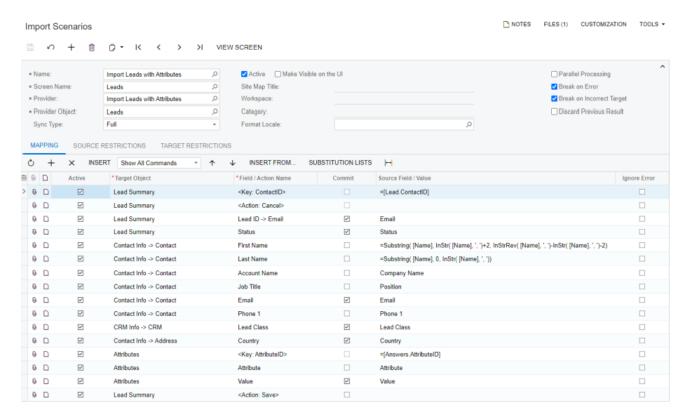
• Import records with attributes.

## Figure: Import Leads with Attributes data provider

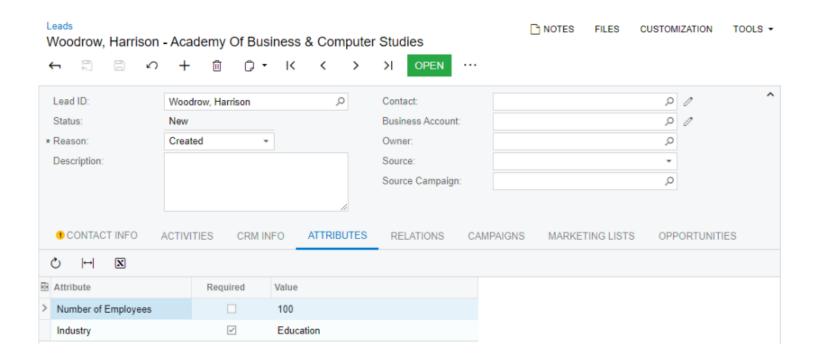




### Figure: The final scenario mapping



## Figure: The Attributes tab



#### **Lesson Summary**

In this lesson, you have learned how to import records with attributes by using import scenarios. To import attributes, you performed the following actions on the Import Scenarios (SM206025) form:

- Mapped the Attribute field of the Attributes object to the name of the attribute. (You did not need to specify the key command before the Attribute field. The system inserts the necessary key commands automatically.)
- 2. Mapped the Value field of the Attributes object to the attribute value. The Commit check box is selected automatically for the field.

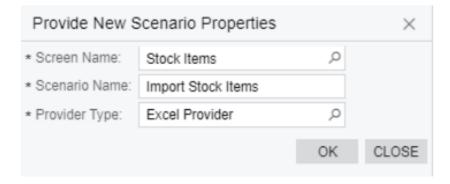
## **Lesson 3.1: Importing Records in the Simplified Way**

#### **Learning Objectives**

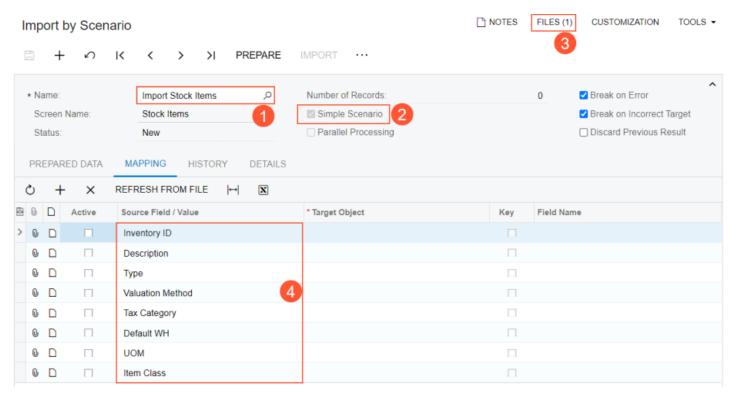
In this lesson, you will learn how to do the following:

- Create a simplified import scenario
- Import data by using the simplified import scenario

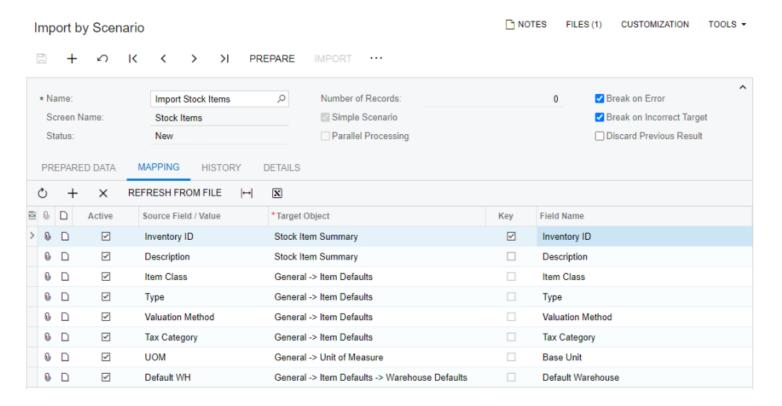
## Figure: Provide New Scenario Properties dialog box



# Figure: Import by Scenario form with the new simplified scenario saved



### Figure: The final scenario mapping



#### **Lesson Summary**

In this lesson, you have learned how to import records from a file by using a simplified import procedure. You have used a simplified scenario in a case when the data in the source file was ready for import into the system by a straightforward mapping of source fields to target fields. For more complex scenarios, we recommend that you use regular import scenarios that you create based on the data provider on the Import Scenarios (SM206025) form. You have performed a simplified import on the Import by Scenario (SM206036) form by performing the following actions:

- 1. Uploading a file that should be used for data import to the form
- 2. Specifying the settings of the simplified scenario
- 3. Mapping the fields of the external file to the Acumatica ERP fields
- 4. Importing the data

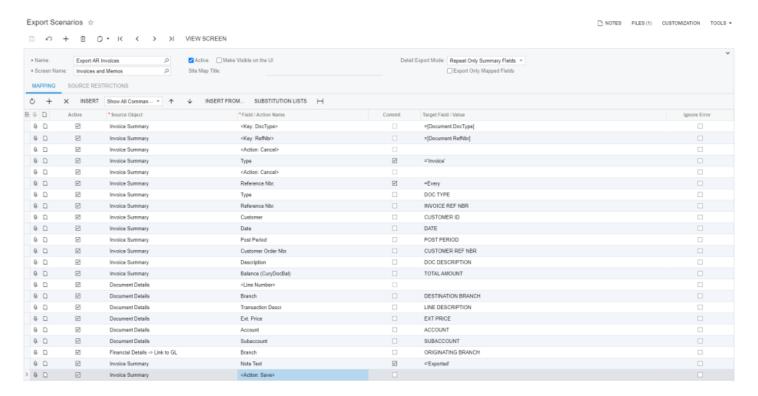
#### **Lesson 4.1: Exporting Records**

#### **Learning Objectives**

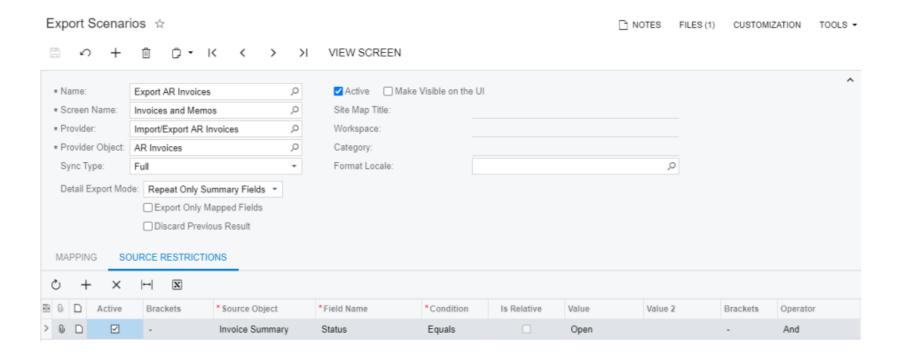
In this lesson, you will learn how to do the following:

- Create a scenario for exporting master records
- Create a scenario for exporting master-detail records
- Create a scenario for exporting records with attributes
- Create a scenario for exporting records from a generic inquiry
- Export records by using the created scenarios

## Figure: The final scenario mapping

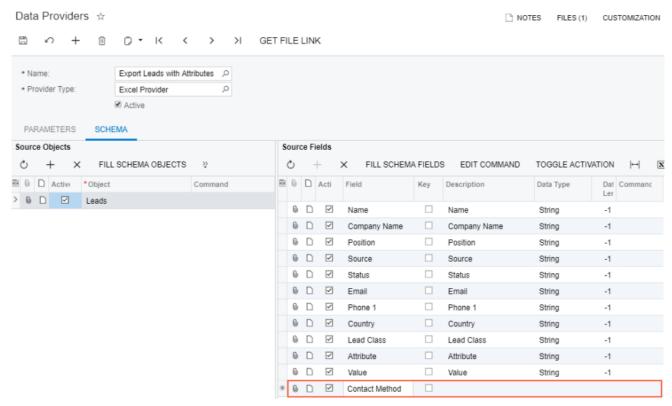


### **Figure: Source restrictions**

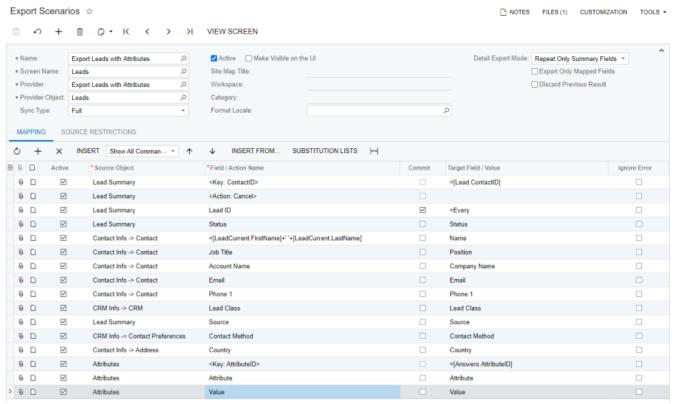




## Figure: Export Leads with Attributes data provider

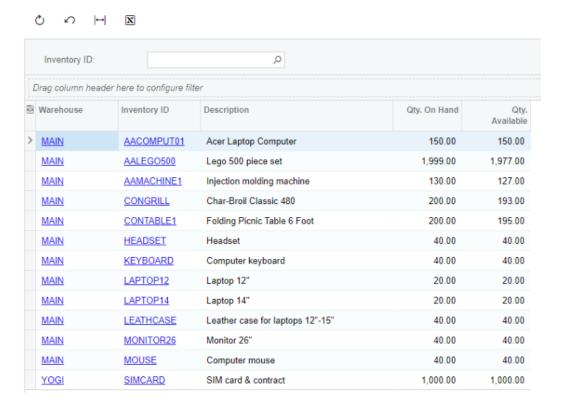


## Figure: Export Leads with Attributes scenario

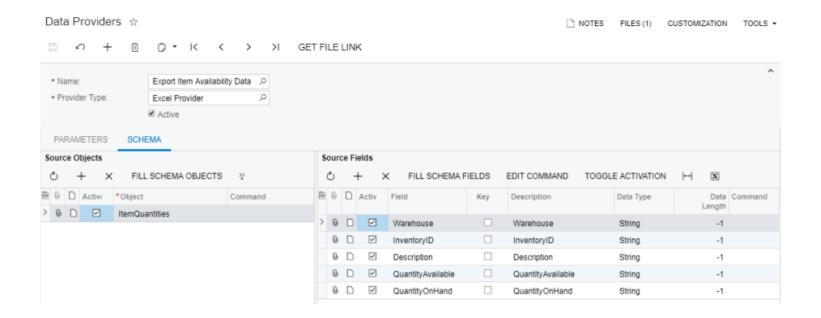


## Figure: Item Availability Data generic inquiry

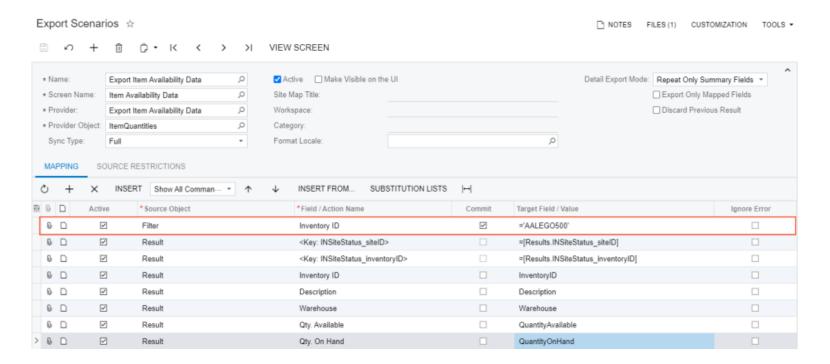
#### Item Availability Data



### Figure: Schema of the created provider



## Figure: Export Item Availability Data scenario



#### **Lesson Summary**

In this lesson, you have learned how to export master records and master-detail records from Acumatica ERP. You have done the following:

- 1. Created a data provider for the target data source
- 2. Developed an understanding of the sequence of actions to be performed on an Acumatica ERP form to select a record for export
- 3. Created an export scenario that uses the created data provider and reproduces the sequence of actions on the form in the scenario mapping
- 4. Exported data records by using the created scenario

When creating the mapping for export scenarios on the Mapping tab of the Export Scenarios (SM207025) form, you have learned to implement the following guidelines:

- The key fields must be mapped first.
- For key fields, you can use the =Every command to select all records available in the system for export.
- If you change the values of the exported record, you have to select the Commit check box for each field for which you change the value.
- You should finish a scenario for data export with <Action: Save> if you change the values of some fields during export.

# Day 4



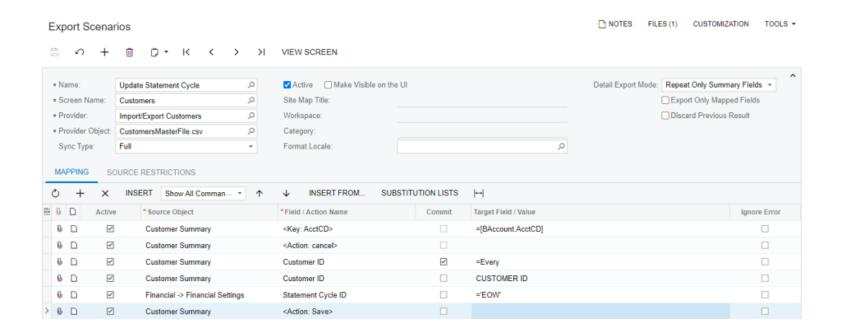
## **Lesson 4.2: Modifying Records By Using Export Scenarios**

#### **Learning Objectives**

In this lesson, you will learn how to do the following:

- Update existing records by using export scenarios
- Apply actions to exported records
- Delete records by using export scenarios

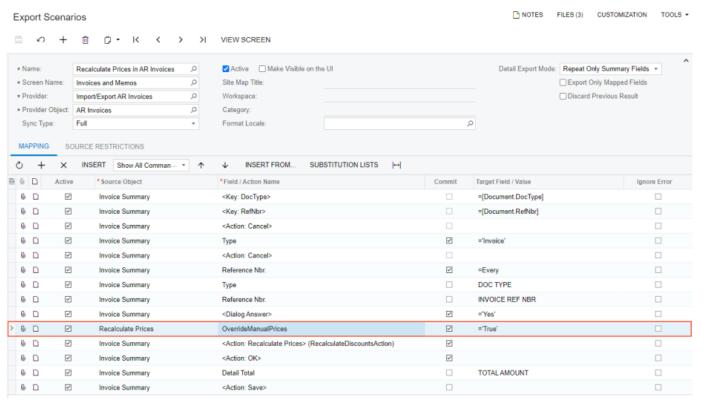
## Figure: Update Statement Cycle export scenario



## **Figure: Source restrictions**

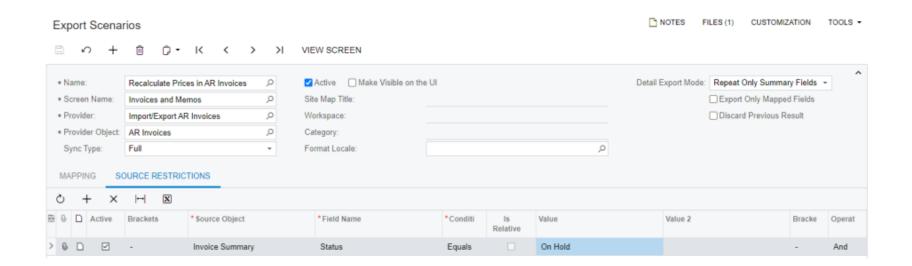


## Figure: Mapping of the Recalculate Prices in AR Invoices export scenario

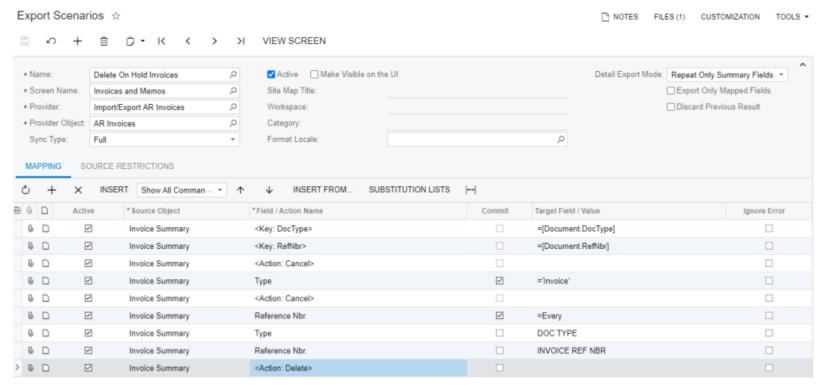




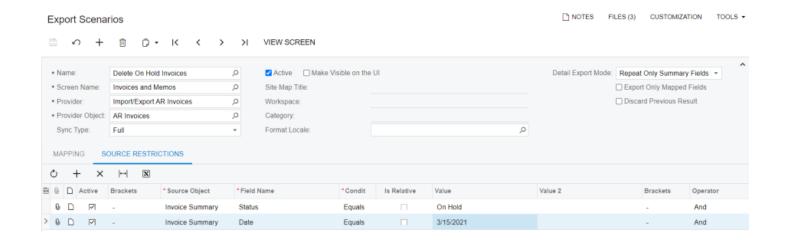
## **Figure: Source restriction**



### Figure: Delete On Hold Invoices export scenario mapping



## **Figure: Source restrictions**



#### **Lesson Summary**

In this lesson, you have learned how to modify the data in the system by using export scenarios. You can use export scenarios for data modification if you need to mass-update records that satisfy some condition and you do not have the list of IDs of these records. You can use export scenarios to update the fields of the records, apply an action to the records, or delete unnecessary records.

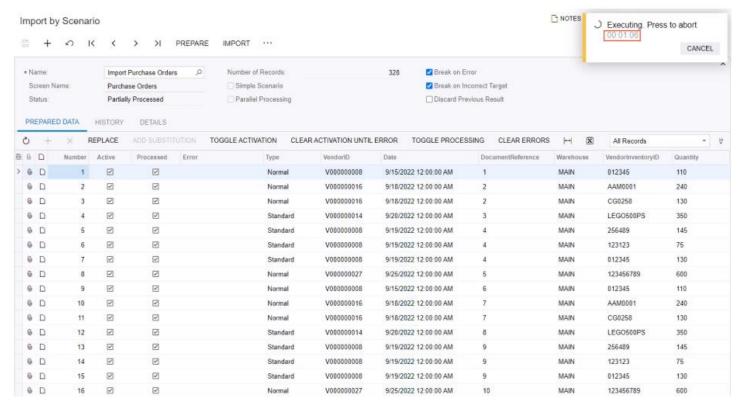
## **Lesson 5.1: Optimizing the Performance of Data Import**

#### **Learning Objectives**

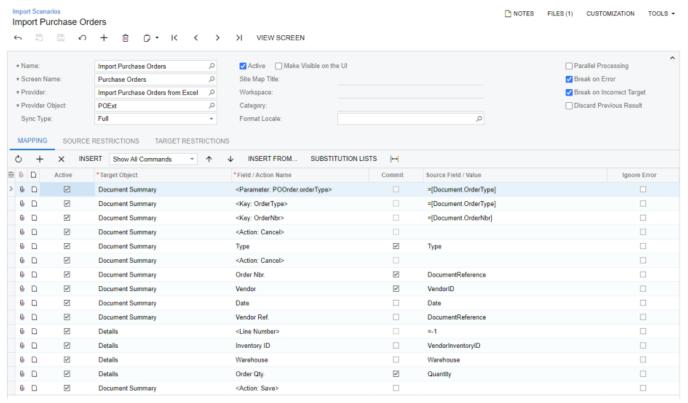
In this lesson, you will learn how to do the following:

• Optimize the performance of import scenarios.

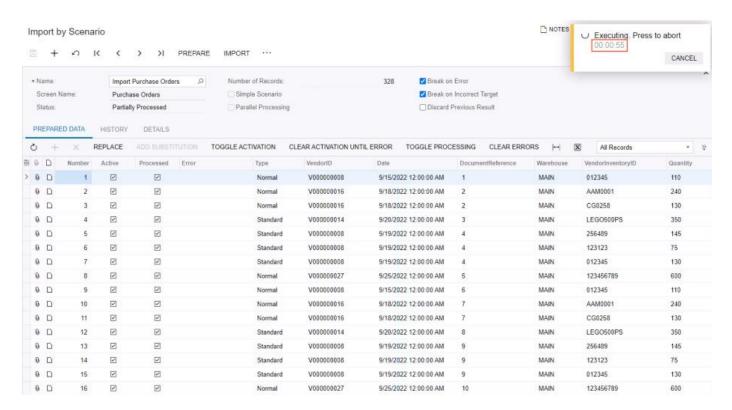
## Figure: Processing time before optimization



### Figure: The final mapping



### Figure: Processing time after optimization



#### **Lesson Summary**

In this lesson, you have learned how to improve the performance of an import scenario. To optimize the performance of a scenario that imports a large number of purchase orders, you have cleared the Commit check box for certain fields in the mapping of the scenario on the Import Scenarios (SM206025) form.

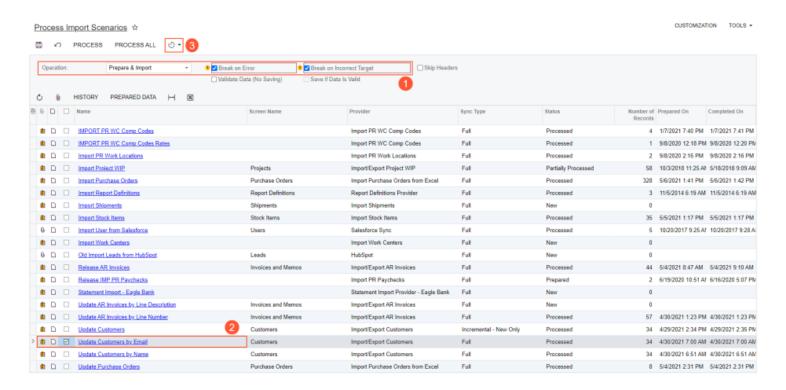
## **Lesson 6.1: Scheduling Data Import and Export**

#### **Learning Objectives**

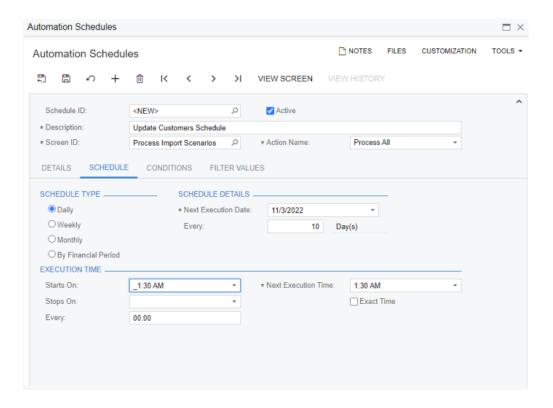
In this lesson, you will learn how to do the following:

Schedule data import and export.

#### Figure: The list of import scenarios with the scenario selected for scheduling



#### Figure: Schedule tab

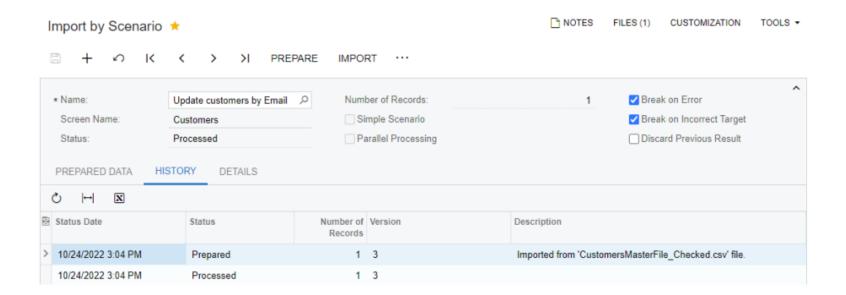


## Figure: The list of active schedules

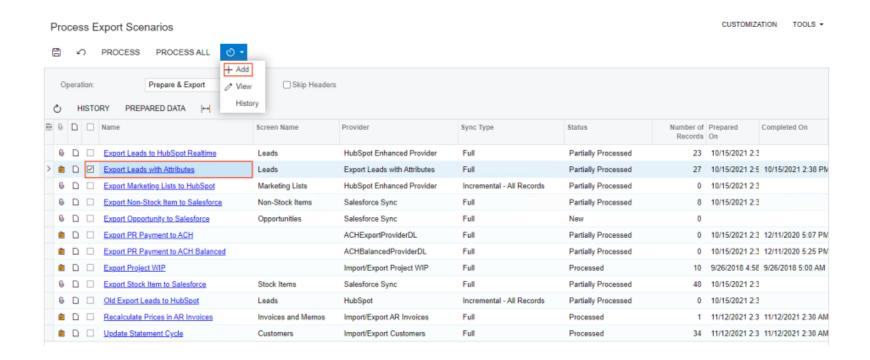
#### Automation Schedule Statuses CUSTOMIZATION TOOLS ▼

(	0	١	/IEW SC	REEN VIEW HI	STORY INITIALIZE SCHEDULER	X						
679	0		Statu	* Screen ID	*Description	Active	*Starts On	Expires On	Time Zone	Last Executed	Last Execution Result	Next Execution Date
	0			SM.20.25.30	Update Customer Master File Schedule	$ \mathbf{Z} $	10/24/2022		(GMT-05:0			11/3/2022 1:00 AM
	0			SM.20.60.35	Update Customers Schedule	$ \mathbf{Z} $	10/24/2022		(GMT-05:0			11/3/2022 1:30 AM
	0	D		SM.50.70.10	Send/Receive Emails		3/19/2020		(GMT) Uni			1/7/2021 9:55 AM

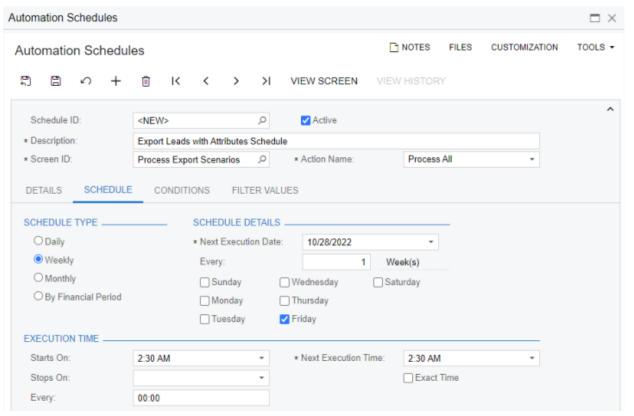
#### Figure: Processed record on the History tab



#### Figure: The list of scenarios with the selected scenario to schedule



#### Figure: Schedule tab



#### **Lesson Summary**

In this lesson, you have learned how to schedule file synchronization between the system and the external source, and how to schedule import and export scenarios to be run. To configure the scheduled synchronization, you have done the following:

- 1. Created an import scenario that loads data from the needed file, and an export scenario that saves data to a file.
- 2. Assigned the created scenario to an automation schedule.
- 3. Configured synchronization between a file in Acumatica ERP and a file from the network resource.
- 4. Scheduled the synchronization of files. For the scheduled import, you have learned to run the file synchronization and then import the scenario. For the scheduled export, you have learned to first run the export scenario and then run the synchronization of files.



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